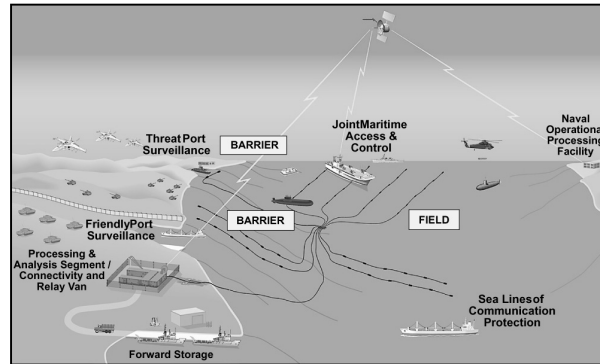


ADVANCED DEPLOYABLE SYSTEM (ADS)



The Advanced Deployable System (ADS) is a littoral water deployable undersea surveillance system designed to provide the Joint Force Commander with a timely and reliable picture of undersea activity. ADS consists of an Underwater Segment, a Processing and Analysis Segment, and a Mission Support Segment.

BACKGROUND INFORMATION

Initial system-level testing of ADS was conducted in March 1998, in an Integrated Article Test designated OT-IA. The arrays were deployed from a towed installation vehicle. Using the Integrated Article Test results, modeling and simulation reviews, and other development tests dating back to 1996, COMOPTEVFOR completed an Early Operational Assessment of ADS in June 1998. This variant of ADS was assessed to be potentially operationally effective. Potential operational suitability could not be determined due to system immaturity. Four significant areas of risk were identified by this Early Operational Assessment: deployment time, joint interoperability, interoperability, and tactics.

An Operational Assessment (OT-IB) was conducted on the ADS system over a 60-day Fleet Exercise Test (FET), in conjunction with various U.S. Third Fleet sponsored exercises between March and May 1999. The craft of opportunity variant of ADS was assessed to be potentially operationally effective and potentially operationally suitable. Three significant areas of risk were identified by this OA: underwater segment survivability, interoperability, and training.

TEST & EVALUATION ACTIVITY

In September 2000, DOT&E observed OT-1C, an operational assessment of a second ADS variant. This was combined DT/OT in conjunction with DT-IE. While the deployment method was physically demonstrated, several technical problems impacted the schedule and ability to assess detection capability. The deployment method for this test was determined to be potentially operationally effective and suitable. Four areas of significant risk were observed: underwater segment survivability, mission planning, reliability, and availability.

DOT&E observed a development test conducted in April 2001 that examined a third ADS variant. COMOPTEVFOR participated in a DT Assist during this test, which demonstrated physical

deployment. Difficulties with cable retrieval techniques and at-sea fiber optic splicing procedures prevented a more comprehensive assessment of the system including detection capability. See the DOT&E 2001 Annual Report Classified Annex for further details regarding this test and OT-1C.

In April 2001, the sponsor restructured the program by reprioritizing the ADS variants in a phased development program. The ORD and TEMP are being restructured accordingly. The draft test strategy calls for operational assessments prior to TECHEVAL and OPEVAL planned for FY04.

TEST & EVALUATION ASSESSMENT

The greatest concern with current ADS deployment options is underwater segment survivability. The array cables are vulnerable to biologics (e.g., fish bites) and the activities of fishing fleets. Survivability of the arrays over the required mission endurance threshold is a major concern due to the potential occurrence of this unintentional damage. Cable burial and greater cable diameter are expected to significantly mitigate this vulnerability. The Navy has selected a larger diameter cable for ADS and is developing a method to bury the ADS trunk cable that links the arrays to the shore site. The capability to bury the entire Underwater Segment will be subsequently developed.